

09/862,388
DP-301,117

IN THE CLAIMS

Please cancel claims 1-4 and 13-15. This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS

1-4. Canceled

5. (Previously Presented) A method of making lithium-intercalateable electrodes for a lithium-ion battery with polymeric separators comprising the steps of:

(A) providing an electrically conductive grid on a carrier sheet and applying a first film-forming slurry onto a first face of ~~an~~ the electrically conductive grid, said first film comprising a plurality of lithium-intercalateable particles dispersed throughout a mixture of polymeric binder compatible with said battery, a plasticizer for said binder, and a solvent for said binder;

(B) drying said first film-forming slurry by removing said solvent;

(C) applying a second carrier strip to the first film and removing the first carrier sheet provided adjacent to a second face of the electrically conductive grid;

(D) applying a second film-forming slurry to a the second face of said grid opposite said first face thereby forming an electrode, said second film comprising a plurality of said lithium-intercalateable particles dispersed throughout the mixture of said binder, said plasticizer and a said solvent whereby said solvent from said slurry dissolves at least some of said binder in said first film, and promotes solvent bonding of said first and second films to each other and to said grid;

(E) thereafter, drying said electrode by removing said solvent;

(F) removing said plasticizer from said binder so as to leave a network of pores pervading said binder; and

(G) backfilling said pores with a lithium-ion-conductive electrolyte.

6. (Original) The method according to claim 5 including heating said electrode to effect said drying.

7. (Original) The method according to claim 6 including the step of pressing said first and second films together while said films are still warm from said heating.

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8. (Original) A method of making lithium-intercalateable electrodes for a lithium-ion battery with polymeric separators comprising the steps of:

(A) forming a first film comprising a plurality of lithium-intercalateable particles dispersed throughout a mixture of polymeric binder compatible with said battery, a plasticizer for said binder, and a solvent for said binder;

(B) drying said first film by removing said solvent;

(C) embedding a first face of an electrically conductive grid into said first film;

(D) applying a film-forming slurry to a second face of said grid opposite said first to form a second film overlying said first film, said slurry comprising a plurality of said lithium-intercalateable particles dispersed throughout a mixture of said binder, said plasticizer and said solvent whereby said solvent from said slurry dissolves at least some of said binder in said first film, and promotes solvent bonding of said first and second films to each other and to said grid;

(E) thereafter, drying said electrode by removing said solvent;

(F) removing said plasticizer from said mixture so as to leave a network of pores pervading said binder; and

(G) backfilling said pores with a lithium-ion-conductive electrolyte.

9. (Original) The method according to claim 8 wherein said grid is embedded in said first film before said first film is dried.

10. (Original) The method according to claim 8 wherein said grid is embedded in said first film after said first film is dried.

11. (Original) The method according to claim 10 including the step of heating said grid prior to said embedding.

12. (Original) The method according to claim 10 including heating said first film and grid during said embedding.

13-15. Canceled